Aerospace Medical Association

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Association Home Office

July 18, 2011

Dr. Claude Thibeault
Medical Advisor, International Air Transport Association
800 Place Victoria
PO BOX 113
Montreal, Quebec H4Z 1M1
CANADA

Dear Dr. Thibeault,

Fatigue has been identified as the largest preventable cause of mishaps in transportation operations and specifically as a causal factor in 4-7 percent of aviation accidents. Scientific evidence indicates aircrew fatigue is largely a function of scheduling factors (night duty, extended work periods, early report times, etc.) which prevent the accumulation of adequate sleep and often require crew members to work at less than optimal circadian periods. Although these causal factors should be addressed, the pressures of 24/7 aviation operations may make it impossible to completely eliminate fatigue from the aviation environment, so a number of other strategies can effectively mitigate fatigue risks.

Two highly efficacious fatigue countermeasures are: 1) short, in-seat cockpit naps to compensate for insufficient sleep, and 2) short-acting hypnotics to optimize the restorative value of "out-of-phase" off-duty/layover sleep. Both strategies can augment the counter-fatigue value of well planned aircrew scheduling and other currently authorized fatigue mitigation strategies.

Cockpit naps: Naps ranging from 20–120 minutes have been scientifically proven to bolster alertness in a variety of circumstances, and a NASA study on 3-member crews determined that 40 minute in-seat, in-flight naps (affording an average of 26 minutes of sleep) during cruise segments enhanced performance and reduced pilot sleepiness during critical flight phases without subsequently compromising the quality or quantity of layover sleep. Furthermore, in-seat cockpit napping is already sanctioned by the U.S. Air Force (AFI 10-202, Vol 3, dated 22 October 2010, Chapter 9, paragraph 9.12.1.4., "Controlled Cockpit Rest").

Short-acting hypnotics: Zolpidem and zaleplon can safely mitigate sleep loss by enhancing the duration and quality of sleep in less than optimal circumstances. Neither agent produces potentially problematic hangover effects provided there is 10 hours between the time the compound is ingested and the time of takeoff. The safety and efficacy of these compounds have been proven in a variety of placebo-controlled and epidemiological studies, and it has been demonstrated that both zolpidem (10 mg) and zaleplon (10 mg) do not disrupt normal sleep architecture or pose significant risks of dependence or addiction. Although the effective use of these medications currently is not authorized by the Federal Aviation Administration and

most civil aviation authorities globally, these medications have long been authorized and successfully used in US Army and US Air Force aviation.

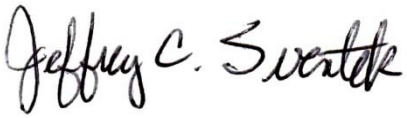
The Aerospace Medical Association membership approved two resolutions supporting these two highly effective fatigue countermeasures. The attached resolutions on "Inflight, In-cockpit Napping" and "Prescription Sleep Medications" were recently approved during the Aerospace Medical Association's Annual Business Meeting.

The Aerospace Medical Association respectfully recommends appropriate steps be taken to authorize the proper use of in-seat napping procedures and short-acting hypnotics as fatigue countermeasures for civil commercial aviation operations. We also recommend that appropriate aeromedical and fatigue experts be consulted to establish detailed, scientifically-based guidelines before approval of these recommended fatigue countermeasures to ensure the safe and effective implementation of these procedures/strategies in the operational civil aviation context.

For additional details regarding our recommendations, please see the Aerospace Medical Association's Position Paper titled "Fatigue Countermeasures in Aviation" published in Aviation, Space, and Environmental Medicine, January 2009, pages 29-59. This Position Paper can also be viewed here: http://www.asma.org/pdf/compendium/2009/fatigue-counters.pdf.

Thank you for your kind consideration of this important effort to augment the safety of global aviation operations. Please feel free to contact the Aerospace Medical Association at (703) 739-2240 extension 105 if we can be of assistance.

Sincerely,



Jeffrey C. Sventek, MS, CAsP
Executive Director

2 Attachments:
1. AsMA Resolution on Inflight In-Cockpit Napping
2. AsMA Resolution on Prescription Sleep Medications

ATTACHMENT 1

Resolution by the
Aerospace Medical Association

AIRCREW FATIGUE COUNTERMEASURES:
INFLIGHT IN-COCKPIT NAPPING

THEREFORE BE IT RESOLVED: That the Aerospace Medical Association strongly recommends that regulatory agencies, in consultation with aerospace medicine and fatigue experts, establish policies and procedures to ensure adequate preflight crew rest and criteria for the use of in-flight, in-cockpit napping when safe to do so, during extended flight operations, to avoid fatigue and enhance aircrew performance.

ATTACHMENT 2

Resolution by the
Aerospace Medical Association

AIRCREW FATIGUE COUNTERMEASURES:
PRESCRIPTION SLEEP MEDICATIONS

THEREFORE BE IT RESOLVED: That the Aerospace Medical Association strongly recommends that regulatory agencies, in coordination with aerospace medicine experts, in addition to the established need for adequate crew rest, determine criteria for the safe adjunctive use of prescription sleep medications for off-duty/layover crew use.